



# STIC Search Report

EIC 1700

STIC Database Tracking Number: 157559

**TO:** Camie Thompson  
**Location:** REM 10D28  
**Art Unit :** 1774  
**July 11, 2005**

**Case Serial Number:** 10/727642

**From:** Kathleen Fuller  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2505  
**Kathleen.Fuller@uspto.gov**

## Search Notes

I SEARCHED A BROAD QUERY WHICH COVERED THE STRUCTURES IN CLAIMS 12,13,AND 18. THERE WERE 43 STRUCTURES GIVING 27 CA REFERENCES, ONLY 3 INCLUDING THE APPLICANT ON ?LUMINES?. I ALSO PRINTED OUT THE REMAINING 24 CA REFERENCES



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact **the EIC searcher or contact:**

**Kathleen Fuller, EIC 1700 Team Leader**  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

➤ I am an examiner in Workgroup:  Example: 1713

➤ Relevant prior art **found**, search results used as follows:

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

*Types of relevant prior art found:*

- Foreign Patent(s)
- Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- Results verified the lack of relevant prior art (helped determine patentability).
- Results were not useful in determining patentability or understanding the invention.

**Comments:**

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Carrie Thompson Examiner #: 792441 Date: 6/21/05  
 Art Unit: 174 Phone Number: 305-571-277-1530 Serial Number: 10/727 642  
 Mail Box and Bldg/Room Location: DMW/10D28 Results Format Preferred (circle):  PAPER  DISK  E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Molecular Chemical Compounds with Structures

Inventors (please provide full names): Michael Redeker SCIENTIFIC REFERENCE BR  
 Sci & Tech Inf. Ctr.

Earliest Priority Filing Date: 1/29/03

JUN 27 REC'D

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Pat. & T.M. Office

Please do a search on claims 1-20

Thanks.

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>X. Fallon</u>		NA Sequence (#):	STN <u>L</u>
Searcher Phone #:		AA Sequence (#):	Dialog
Searcher Location:		Structure (#):	Questel/Orbit <u>Q</u>
Date Searcher Picked Up:		Bibliographic:	Dr. Link
Date Completed: <u>7/11/05</u>		Litigation:	Lexis/Nexis
Searcher Prep & Review Time: <u>40</u>		Fulltext:	Sequence Systems
Clerical Prep Time:		Patent Family:	WWW/Internet
Online Time: <u>38</u>		Other:	Other (specify)

THOMPSON 10/727642 7/11/05 Page 1

=> FILE REG  
FILE 'REGISTRY' ENTERED AT 11:18:06 ON 11 JUL 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8  
DICTIONARY FILE UPDATES: 10 JUL 2005 HIGHEST RN 854370-36-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLU  
FILE 'HCAPLUS' ENTERED AT 11:18:10 ON 11 JUL 2005  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 11 Jul 2005 VOL 143 ISS 3  
FILE LAST UPDATED: 10 Jul 2005 (20050710/ED)

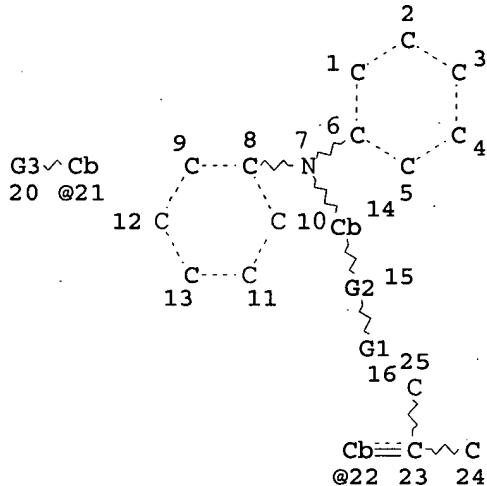
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=&gt; D QUE

L3

STR

Cb~Hy  
@18 19

Ak @17 Hy @26

query covers very broadly the structures in claims 12, 13, 18

43 structures found

VAR G1=21/26/22

VAR G2=17/18

VAR G3=F/CN/NO2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 14

GGCAT IS UNS AT 17

GGCAT IS UNS AT 18

GGCAT IS UNS AT 21

GGCAT IS PCY UNS AT 22

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M4 C AT 17

ECOUNT IS M1 N AT 19

ECOUNT IS M1 N AT 26

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L5 43 SEA FILE=REGISTRY SSS FUL L3

L7 27 SEA FILE=HCAPLUS ABB=ON L5

L8 3 SEA FILE=HCAPLUS ABB=ON L7 AND ?LUMINES?

=&gt; D L8 BIB ABS IND HITSTR 1-3

L8 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2005:281206 HCAPLUS

DN 142:344877

TI Organic electroluminescent (EL) devices with high brightness, emission efficiency, and heat resistance

IN Maki, Shinichiro; Tanaka, Hiroaki; Kaneko, Tetsuya; Onikubo, Shunichi

PA Toyo Ink Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 29 pp.

3 CA references with

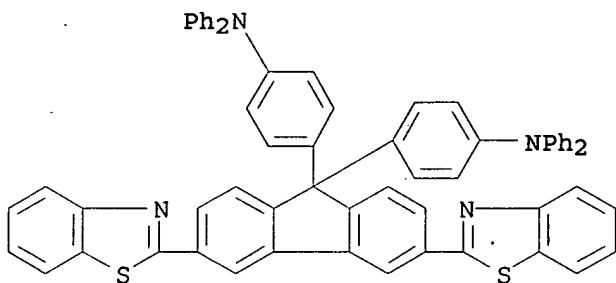
CODEN: JKXXAF

DT Patent

LA Japanese

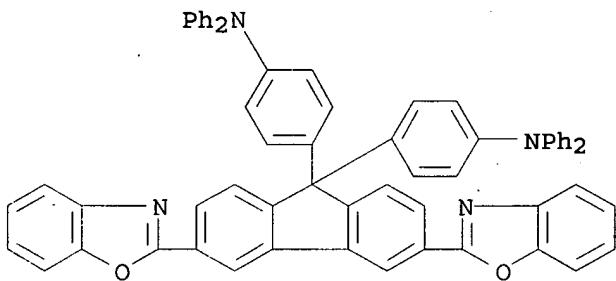
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005085599	A2	20050331	JP 2003-316326	20030909
PRAI	JP 2003-316326		20030909		
AB	The devices, useful for displays in automobiles, have phosphor-containing light-emitting layers (A) or plural organic thin film layers including A, wherein the organic layers contain (un)substituted 9-R1-9-R2-fluorene [R1, R2 = (un)substituted Ph] in A or in hole-injecting and/or hole-transporting layers.				
IC	ICM H05B033-22 ICS C09K011-06; H05B033-14				
CC	73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)				
ST	electroluminescent device phenylfluorene hole transporter durability; heat resistance EL hole injection fluorene				
IT	Electroluminescent devices (organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	147-14-8, Copper phthalocyanine 123847-85-8 RL: TEM (Technical or engineered material use); USES (Uses) (hole-injecting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	159526-57-5 166444-94-6 166444-95-7 166444-97-9 166444-98-0 174141-92-5 174141-94-7 213968-66-2 268730-91-2 848679-60-7 848679-61-8 848679-69-6 848679-70-9 848679-71-0 RL: TEM (Technical or engineered material use); USES (Uses) (hole-injecting or hole-transporting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	53812-81-0 848679-58-3 848679-59-4 848679-62-9 848679-63-0 848679-64-1 848679-65-2 848679-66-3 848679-67-4 848679-68-5 RL: TEM (Technical or engineered material use); USES (Uses) (hole-injecting, hole-transporting, or light-emitting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	58328-31-7 848679-72-1 848679-73-2 848679-74-3 848679-75-4 RL: TEM (Technical or engineered material use); USES (Uses) (host, light-emitting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	94928-86-6 RL: TEM (Technical or engineered material use); USES (Uses) (phosphor, light-emitting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
IT	848679-65-2 848679-67-4 RL: TEM (Technical or engineered material use); USES (Uses) (hole-injecting, hole-transporting, or light-emitting layer; organic EL devices containing diphenylfluorene derivs. with high brightness, emission efficiency, and heat resistance)				
RN	848679-65-2 HCAPLUS				
CN	Benzenamine, 4,4'-(3,6-bis(2-benzothiazolyl)-9H-fluoren-9-ylidene]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)				



RN 848679-67-4 HCAPLUS

CN Benzenamine, 4,4'-[3,6-bis(2-benzoxazolyl)-9H-fluoren-9-ylidene]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



L8 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:609956 HCAPLUS

DN 141:164924

TI Molecular chemical compounds for emitting photoluminescent radiation, and photoluminescence quenching device employing the same

IN Redecker, Michael

PA Germany

SO U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

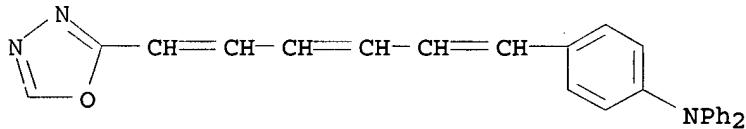
FAN.CNT 1

applicant

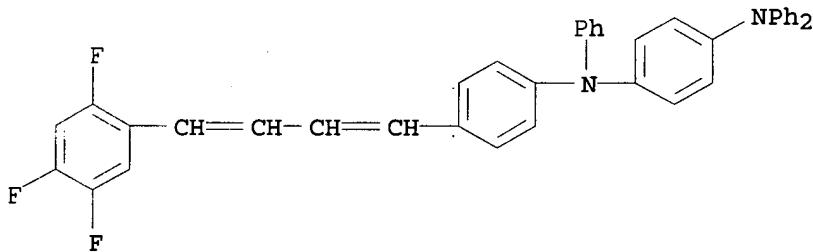
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004147701	A1	20040729	US 2003-727642	20031205
	EP 1443093	A1	20040804	EP 2003-90022	20030129
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004339190	A2	20041202	JP 2004-7343	20040114
PRAI	EP 2003-90022	A	20030129		
	KR 2003-59486	A	20030827		
AB	A chemical compound has an electron donor group, an electron acceptor group, and a conjugated bridging element bridging between the electron donor group and the electron acceptor group. The chemical compound has a readily displaceable electron, is capable of emitting photoluminescent radiation. A dipole character is present therein only in the excited state of the compound. The compds. are suitable for use in optical devices and, particularly, can be used for photoluminescence quenching				

devices.

IC ICM C08G061-00  
 ICS C08G079-08  
 INCL 528004000  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST Luminescence quenching device display electron displacement emitting  
 IT Luminescence quenching  
 Optical imaging devices  
 (mol. chemical compds. for emitting photoluminescent radiation for photoluminescence quenching device)  
 IT 728915-85-3 728915-86-4 728915-87-5  
 728915-89-7 728915-91-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (mol. chemical compds. for emitting photoluminescent radiation for photoluminescence quenching device)  
 IT 728915-85-3 728915-86-4 728915-87-5  
 728915-89-7 728915-91-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (mol. chemical compds. for emitting photoluminescent radiation for photoluminescence quenching device)  
 RN 728915-85-3 HCAPLUS  
 CN Benzenamine, 4-[6-(1,3,4-oxadiazol-2-yl)-1,3,5-hexatrienyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

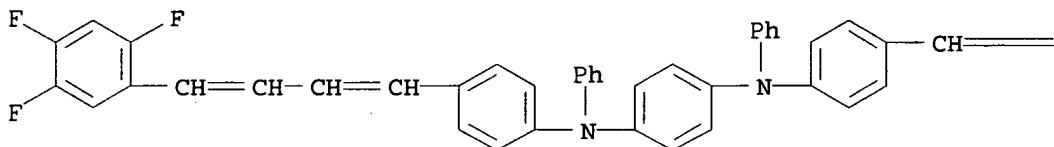


RN 728915-86-4 HCAPLUS  
 CN 1,4-Benzenediamine, N,N,N'-triphenyl-N'-[4-[4-(2,4,5-trifluorophenyl)-1,3-butadienyl]phenyl]- (9CI) (CA INDEX NAME)

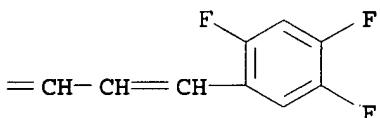


RN 728915-87-5 HCAPLUS  
 CN 1,4-Benzenediamine, N,N'-diphenyl-N,N'-bis[4-[4-(2,4,5-trifluorophenyl)-1,3-butadienyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 728915-89-7 HCPLUS

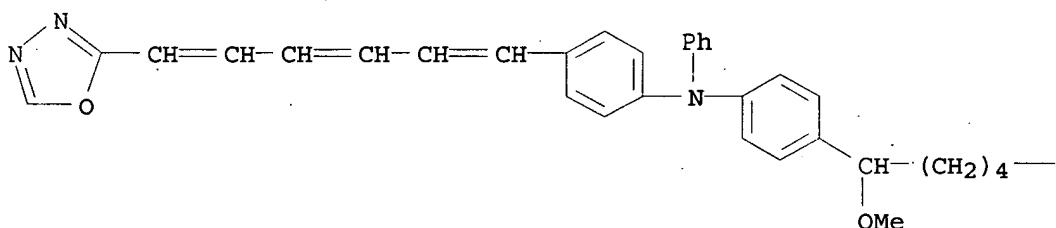
CN Benzenamine, 4-[4-[(1,3,4-oxadiazol-2-yl)-1,3,5-hexatrienyl]phenyl]-N-phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 728915-88-6

CMF C33 H35 N3 O2

PAGE 1-A



PAGE 1-B

— Me

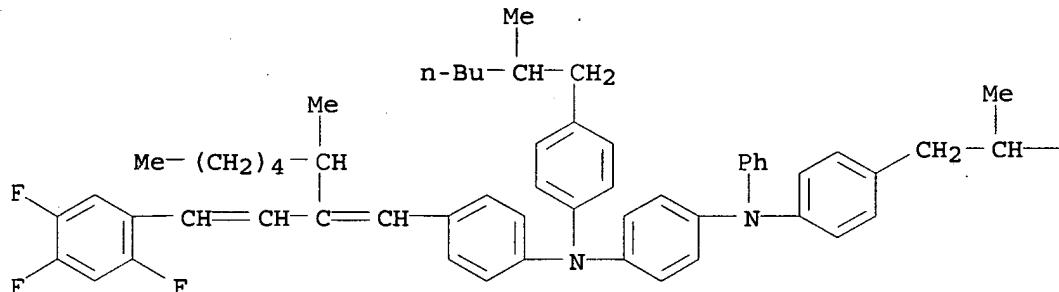
RN 728915-91-1 HCPLUS

CN 1,4-Benzenediamine, N,N'-bis[4-(2-methylhexyl)phenyl]-N-[4-[3-methyl-2-[2-(2,4,5-trifluorophenyl)ethenyl]-1-octenyl]phenyl]-N'-phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 728915-90-0  
CMF C61 H71 F3 N2

PAGE 1-A



PAGE 1-B

— Bu-n

L8 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:861938 HCAPLUS  
DN 141:196735  
TI Highly efficient light emitters based on the spiro concept  
AU Spehr, Till; Pudzich, Robert; Fuhrmann, Thomas; Salbeck, Josef  
CS Department of Science and Center for Interdisciplinary Nanostructure  
Science and Technology (CINSaT), Macromolecular Chemistry and Molecular  
Materials, University of Kassel, Kassel, D-34109, Germany  
SO Organic Electronics (2003), 4(2-3), 61-69  
CODEN: OERLAU; ISSN: 1566-1199  
PB Elsevier Science B.V.  
DT Journal  
LA English  
AB The authors present a comparison of different mol. glasses based on the  
spiro-concept with respect to their photoemission properties. The  
absorption and emission spectra as well as the photoluminescence  
quantum yields in solution were characterized. For thin amorphous films,  
prepared by vacuum vapor deposition, the authors examined amplified  
spontaneous emission (ASE) by optical pumping with picosecond pulses at  
337 nm. Efficient ASE emission with thresholds of down to 1  $\mu$ J/cm<sup>2</sup> was  
observed  
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related  
Properties)  
Section cross-reference(s): 22  
ST light emitter photoemission fluorescence absorption spectra spiro compd  
IT Fluorescence  
Luminescence  
UV and visible spectra  
(highly efficient light emitters based on spiro concept and their  
optical properties)  
IT Spiro compounds

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
 (highly efficient light emitters based on spiro concept and their optical properties)

IT Stimulated emission

(line narrowing by; highly efficient light emitters based on spiro concept and their optical properties)

IT Luminescence

(spontaneous, amplified; highly efficient light emitters based on spiro concept and their optical properties)

IT 171408-93-8 171408-94-9 171408-95-0 189363-47-1 214078-86-1  
 296269-66-4 490025-09-7 574746-63-7 **574746-64-8**  
 736982-07-3 736982-08-4

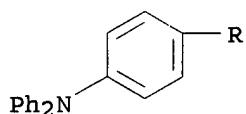
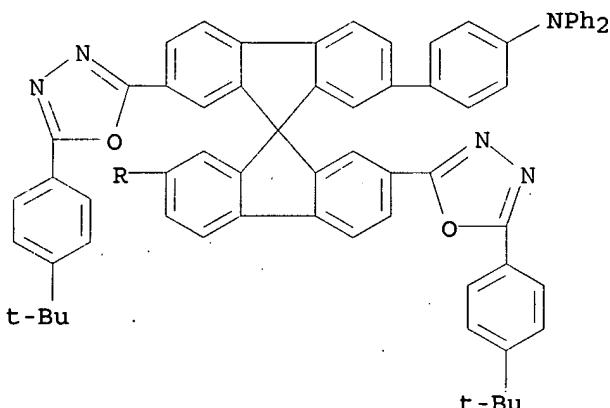
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
 (highly efficient light emitters based on spiro concept and their optical properties)

IT **574746-64-8**

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
 (highly efficient light emitters based on spiro concept and their optical properties)

RN 574746-64-8 HCAPLUS

CN Benzenamine, 4,4'-[7,7'-bis[5-[4-(1,1-dimethylethyl)phenyl]-1,3,4-oxadiazol-2-yl]-9,9'-spirobi[9H-fluorene]-2,2'-diyl]bis[N,N-diphenyl-(9CI) (CA INDEX NAME)

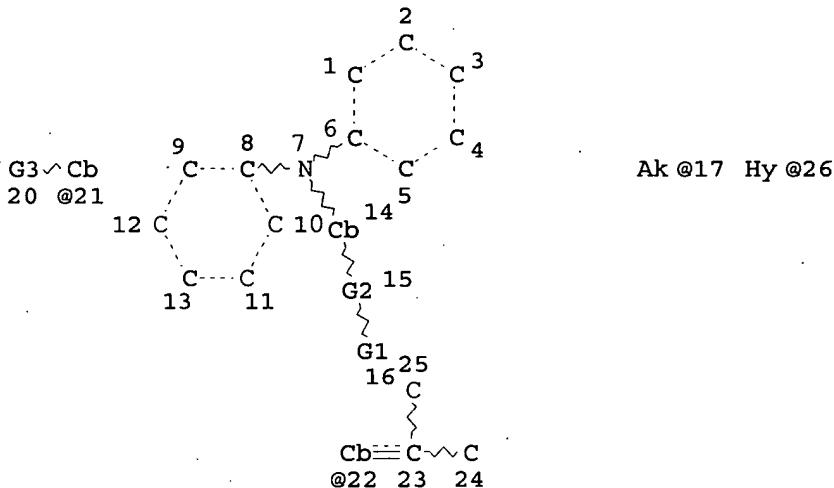


RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> => D QUE

L3

STR

Cb~Hy  
@18 19

VAR G1=21/26/22

VAR G2=17/18

VAR G3=F/CN/NO2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 14

GGCAT IS UNS AT 17

GGCAT IS UNS AT 18

GGCAT IS UNS AT 21

GGCAT IS PCY UNS AT 22

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M4 C AT 17

ECOUNT IS M1 N AT 19

ECOUNT IS M1 N AT 26

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L5 43 SEA FILE=REGISTRY SSS FUL L3

L7 27 SEA FILE=HCAPLUS ABB=ON L5

L8 3 SEA FILE=HCAPLUS ABB=ON L7 AND ?LUMINES?

L9 24 SEA FILE=HCAPLUS ABB=ON L7 NOT L8

=&gt; D L9 BIB ABS HITSTR 1-24

L9 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:522620 HCAPLUS

DN 143:35110

TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming images with high density and resolution thereby

IN Shibata, Toyoko; Sakimura, Tomoko; Asano, Masao

PA Konica Minolta Business Technologies, Inc., Japan

Remaining 24  
CA references  
no utility specified

SO Jpn. Kokai Tokkyo Koho, 92 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005156799	A2	20050616	JP 2003-393571	20031125
PRAI	JP 2003-393571		20031125		

AB The photoreceptors contain (A) pigments based on metal-free condensed polycyclic compds. (e.g., perylenes) and containing metal atoms (e.g., Ti, Cu, Fe) and (B) mixts. of X(CTM)ny (CTM = electron-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H or halo, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum component, resp.). Also claimed are photoreceptors having A-containing charge-generating layers and B-containing charge-transporting layers. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

IT 851957-20-5

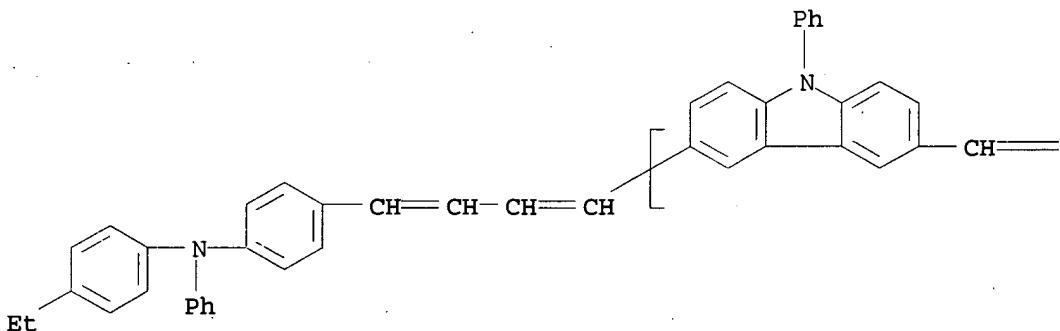
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers and metal-containing condensed polycyclic pigments for forming high-resolution images)

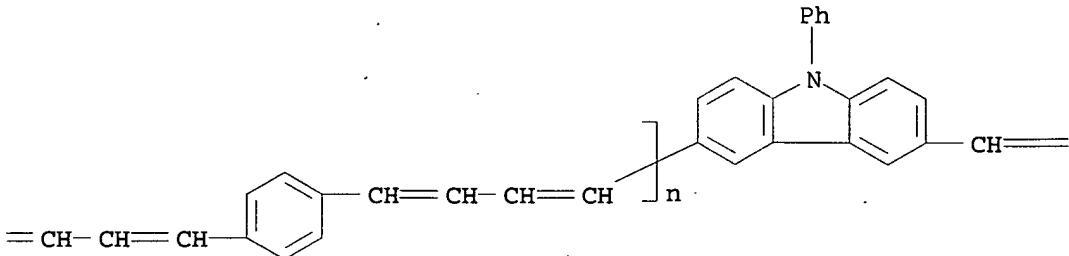
RN 851957-20-5 HCPLUS

CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl],  $\alpha$ -[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]- $\omega$ -[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl]- (9CI) (CA INDEX NAME)

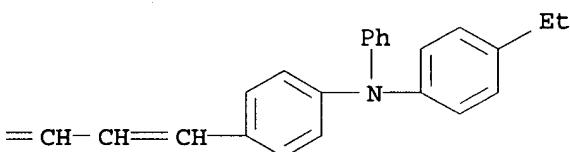
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:522619 HCAPLUS

DN 143:35109

TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming images with high density and resolution thereby

IN Shibata, Toyoko; Sakimura, Tomoko; Asano, Masao

PA Konica Minolta Business Technologies, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 90 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005156798	A2	20050616	JP 2003-393570	20031125
PRAI JP 2003-393570		20031125		

AB The photoreceptors contain adducts of Ti phthalocyanines and 1,2-glycols and mixts. of X(CTM)<sub>n</sub>Y (CTM = electron-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H or halo, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum component, resp.). Also claimed are photoreceptors having charge-generating layers containing the adducts and charge-transporting layers containing the mixts. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

IT 851957-20-5

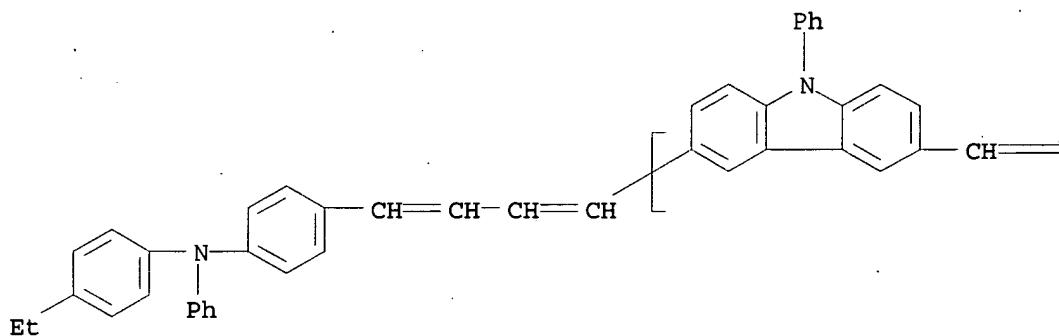
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (oligomers, charge transporters; electrophotog. photoreceptors containing charge-transporting oligomers and titanyl phthalocyanine- $\alpha$ -glycol adducts for forming high-resolution images)

RN 851957-20-5 HCAPLUS

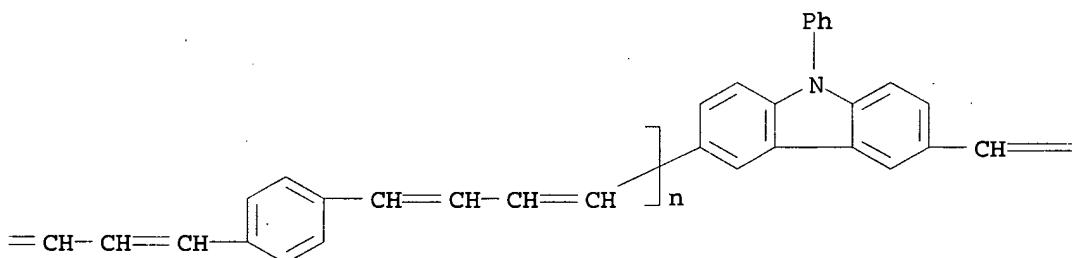
CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl],  $\alpha$ -[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-

1,3-butadienyl]-ω-[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

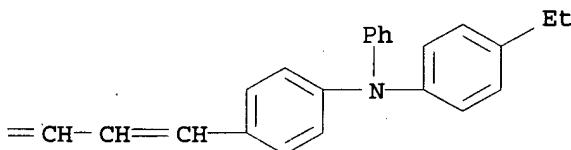
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2005:522618 HCAPLUS  
DN 143:35108  
TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming images with high density and resolution thereby  
IN Sakimura, Tomoko; Shibata, Toyoko; Asano, Masao; Yamazaki, Hiroshi  
PA Konica Minolta Business Technologies, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 83 pp.  
CODEN: JKXXAF

DT Patent  
 LA Japanese  
 FAN.CNT 1

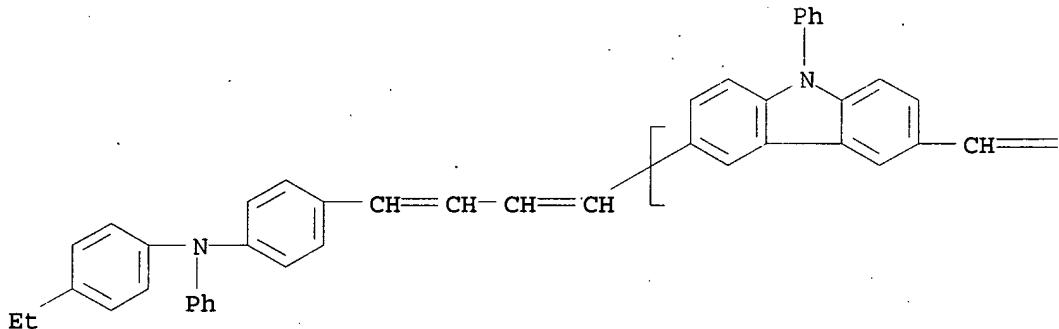
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005156797	A2	20050616	JP 2003-393569	20031125
PRAI	JP 2003-393569		20031125		

AB The photoreceptors contain Ga phthalocyanine pigments and mixts. of X(CTM)<sub>n</sub>Y (CTM = electron-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H or halo, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum component, resp.). Also claimed are photoreceptors having charge-generating layers containing the pigments and charge-transporting layers containing the mixts. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

IT 851957-20-5  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers and gallium phthalocyanine pigments for forming high-resolution images)

RN 851957-20-5 HCPLUS  
 CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl], α-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-ω-[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl]- (9CI) (CA INDEX NAME)

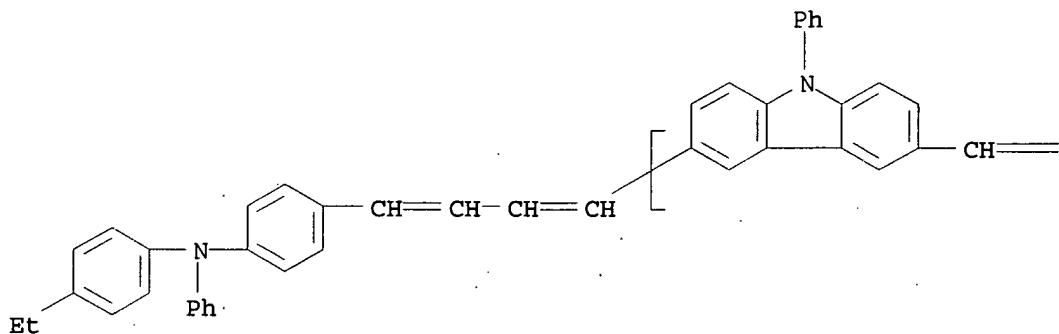
PAGE 1-A



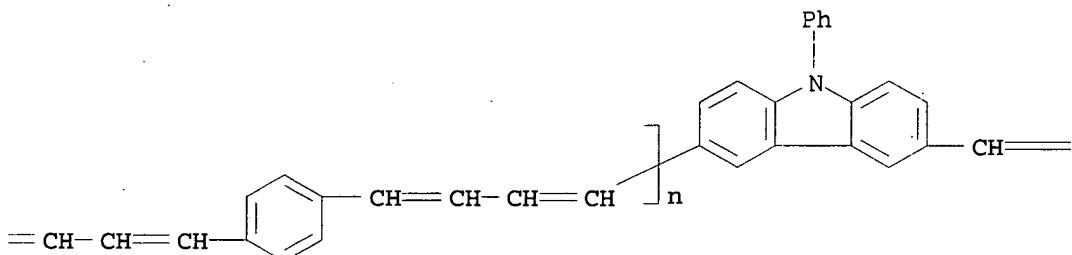


butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

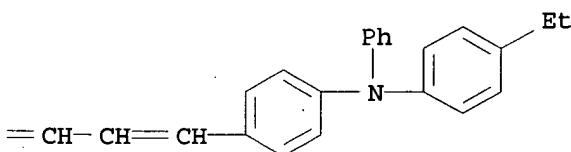
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:450047 HCAPLUS

DN 142:490348

TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming high-quality sharp images thereby

IN Sakimura, Tomoko; Shibata, Toyoko

PA Konica Minolta Business Technologies, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 79 pp.

CODEN: JKXXAF

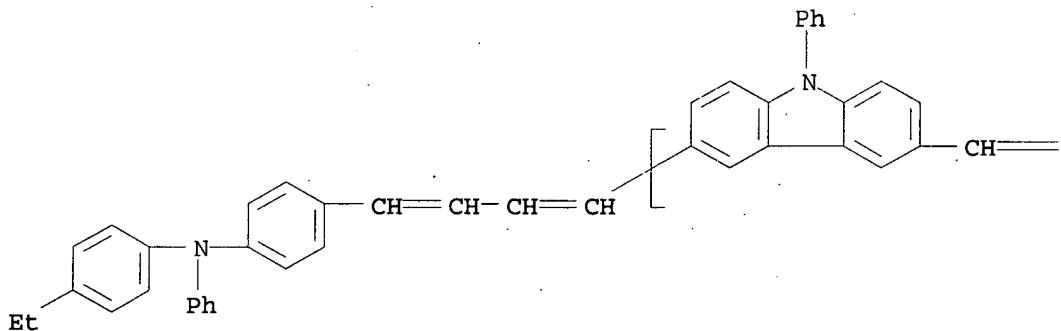
DT Patent

LA Japanese

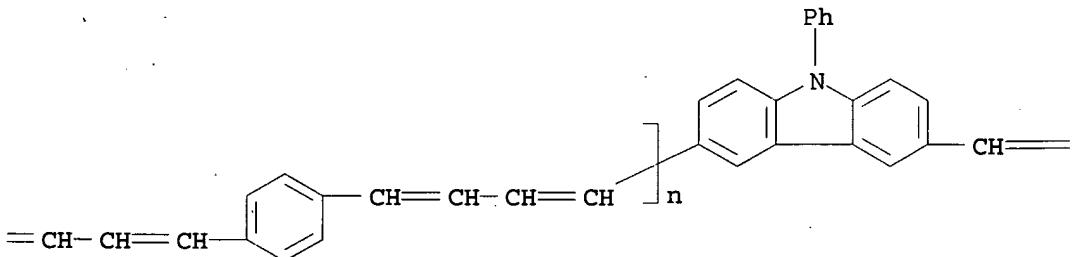
## FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005134607	A2	20050526	JP 2003-370109	20031030
PRAI	JP 2003-370109		20031030		
AB	The photoreceptors contain (A) X(CTM) <sub>n</sub> Y mixts. (CTM = charge-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H, n = 1-10) with mol. weight $\leq$ 1000-fraction 10-90%. Also claimed are photoreceptors having charge-generating layers on conductive supports and A-containing charge-transporting layers thereon. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.				
IT	851957-20-5				
	RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers for forming high-quality sharp images)				
RN	851957-20-5	HCAPLUS			
CN	Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl], $\alpha$ -[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]- $\omega$ -[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)				

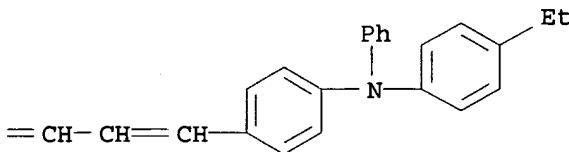
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:450034 HCAPLUS

DN 142:490345

TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming high-quality sharp images thereby

IN Sakimura, Tomoko; Shibata, Toyoko; Yamazaki, Hiroshi; Asano, Masao

PA Konica Minolta Business Technologies, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 91 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005134516	A2	20050526	JP 2003-368610	20031029
PRAI	JP 2003-368610		20031029		

AB The photoreceptors contain (A) X(CTM)<sub>n</sub>Y mixts. (CTM = charge-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum components, resp.) and have (B) inorg. particles

(e.g., hydrophobic silica) on the surfaces. In photoreceptors having charge-generating layers and charge-transporting layers in this order on conductive supports, the mixts. A are contained in the charge-transporting layers. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

IT 851957-20-5

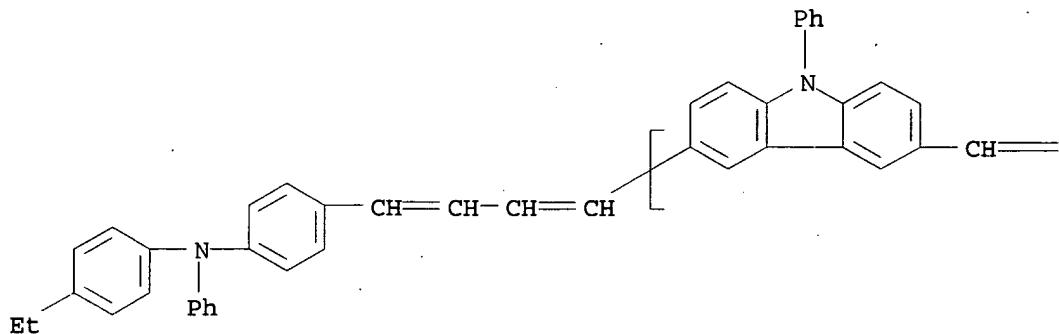
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers and surface inorg. particles for forming high-quality sharp images)

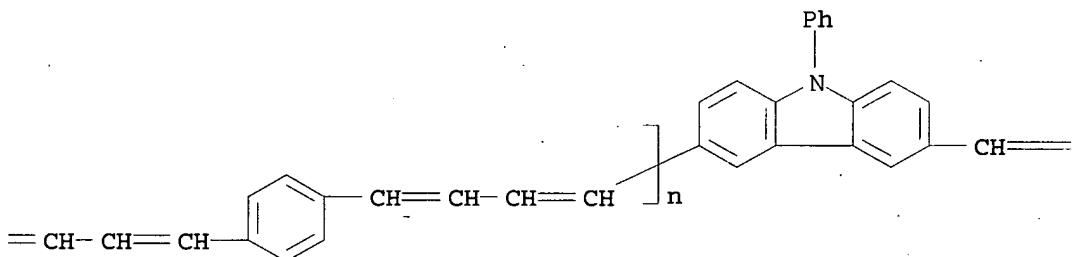
RN 851957-20-5 HCAPLUS

CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl], α-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-ω-[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

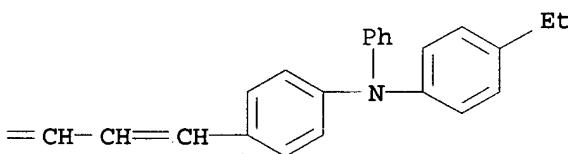
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2005:450033 HCAPLUS  
 DN 142:490344  
 TI Electrophotographic apparatus, photoreceptors therefor, process cartridges  
 therewith, and method for forming high-quality sharp images thereby  
 IN Shibata, Toyoko; Sakimura, Tomoko; Yamazaki, Hiroshi; Asano, Masao  
 PA Konica Minolta Business Technologies, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 89 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE

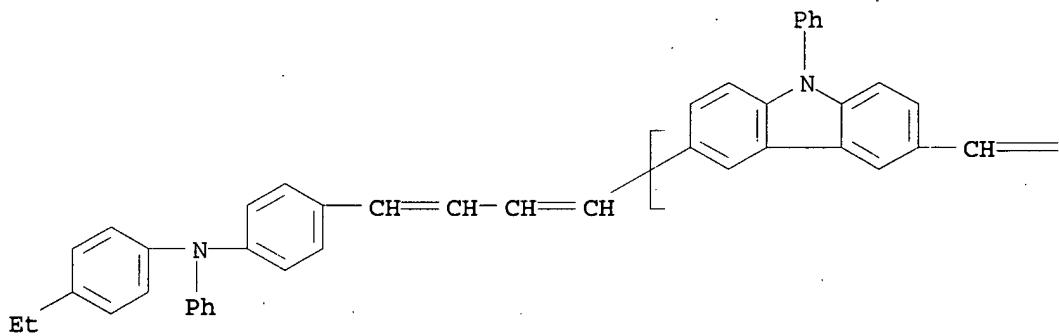
PI JP 2005134515 A2 20050526 JP 2003-368609 20031029  
 PRAI JP 2003-368609 20031029

AB The photoreceptors contain (A) X(CTM)<sub>n</sub>Y mixts. (CTM = charge-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum components, resp.) and electron-injecting layers. In photoreceptors having charge-generating layers and charge-transporting layers in this order on conductive supports, the mixts. A are contained in the charge-transporting layers. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

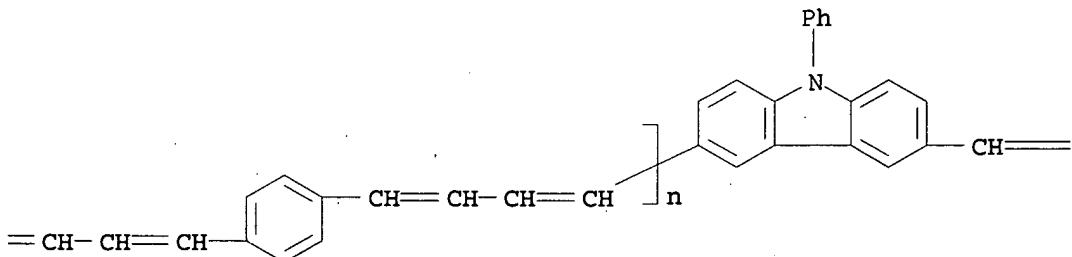
IT 851957-20-5  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers and electron-injecting layers for forming high-quality sharp images)

RN 851957-20-5 HCPLUS  
 CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl],  $\alpha$ -[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]- $\omega$ -[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

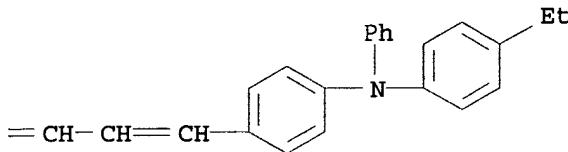
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2005:450032 HCAPLUS

DN 142:490343

TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming high-quality sharp images thereby

IN Shibata, Toyoko; Sakimura, Tomoko; Yamazaki, Hiroshi; Asano, Masao

PA Konica Minolta Business Technologies, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 112 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005134514	A2	20050526	JP 2003-368608	20031029
PRAI JP 2003-368608		20031029		

AB The photoreceptors contain (A) crosslinked siloxanes (containing other polymers, antioxidants, and/or charge-transporting components) and (B) X(CTM)<sub>n</sub>Y mixts. (CTM = charge-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum components, resp.). Photoreceptors having charge-generating layers on conductive supports, B-containing charge-transporting layers thereon, and A-containing surface layers are also claimed. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

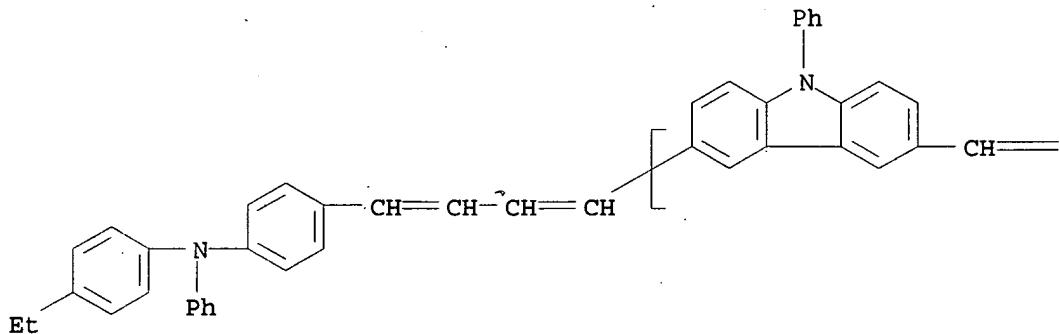
IT 851957-20-5

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(oligomers, charge transporters; electrophotog. photoreceptors containing charge-transporting oligomers and crosslinked siloxanes for forming high-quality sharp images)

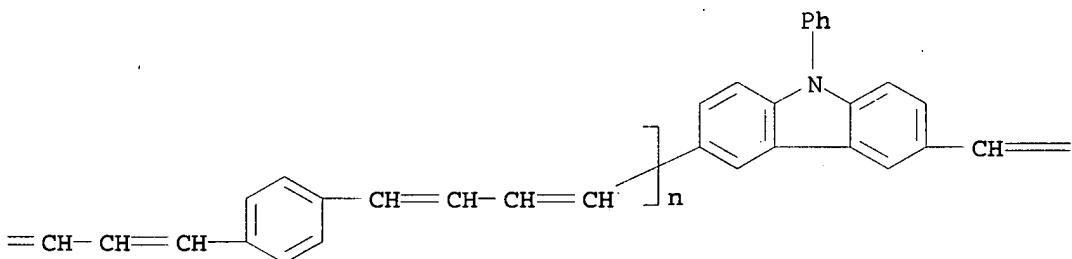
RN 851957-20-5 HCAPLUS

CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl], α-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-ω-[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

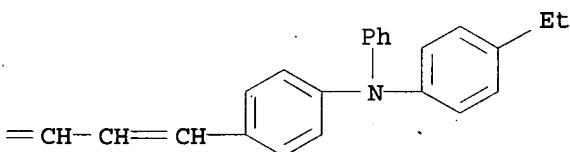
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2005:445387 HCAPLUS  
DN 142:490340  
TI Electrophotographic apparatus, photoreceptors therefor, process cartridges therewith, and method for forming high-quality sharp images thereby  
IN Shibata, Toyoko; Sakimura, Tomoko; Yamazaki, Hiroshi; Asano, Masao  
PA Konica Minolta Business Technologies, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 87 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2005134606 A2 20050526 JP 2003-370108 20031030  
PRAI JP 2003-370108 20031030

AB The photoreceptors contain (A) X(CTM)<sub>n</sub>Y mixts. (CTM = charge-transporting group; X, Y = H, halo, monovalent organic group; n = 0-10; with the proviso that when X = Y = H, n = 1-10) with x + y ≤ 99% (x, y = concentration of the maximum and the 2nd maximum components, resp.) and have (B) (F-containing) organic

particles (e.g., hydrophobic silica) on the surfaces (e.g., in protective layers). In photoreceptors having charge-generating layers and charge-transporting layers in this order on conductive supports, the mixts. A are contained in the charge-transporting layers. In process cartridges, the photoreceptors are held together with chargers, imagers, developers, transfer means, charge removers, and/or cleaning means.

IT 851957-20-5

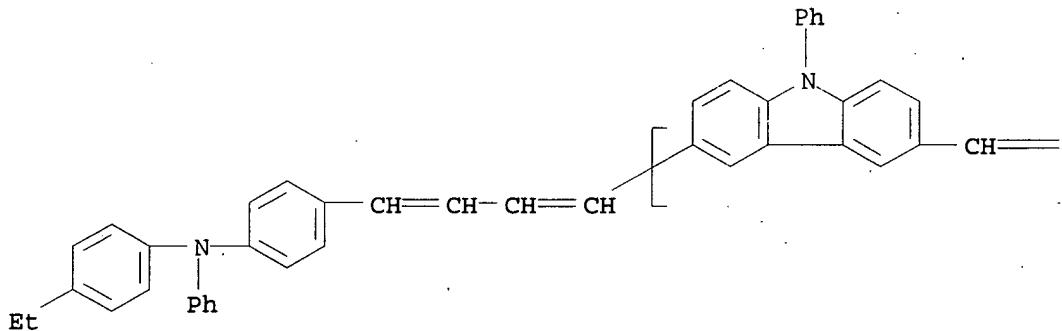
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(oligomers, charge transporters; electrophotog. photoreceptors having charge-transporting oligomers and surface organic particles for forming high-quality sharp images)

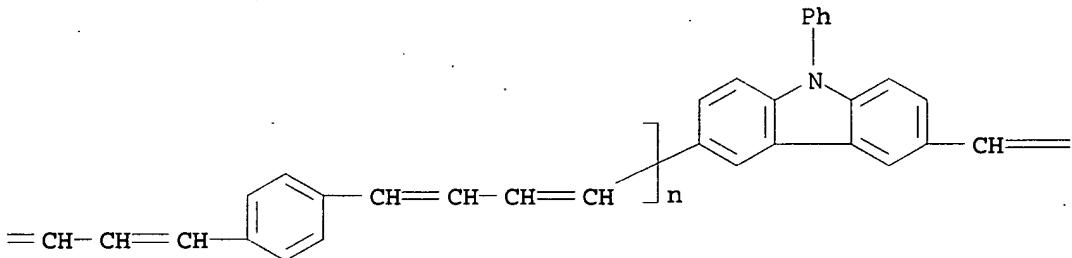
RN 851957-20-5 HCAPLUS

CN Poly[(9-phenyl-9H-carbazole-3,6-diyl)-1,3-butadiene-1,4-diyl-1,4-phenylene-1,3-butadiene-1,4-diyl],  $\alpha$ -[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]- $\omega$ -[6-[4-[4-[(4-ethylphenyl)phenylamino]phenyl]-1,3-butadienyl]-9-phenyl-9H-carbazol-3-yl] - (9CI) (CA INDEX NAME)

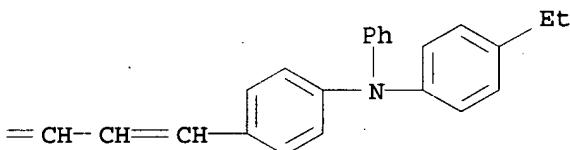
PAGE 1-A



PAGE 1-B



PAGE 1-C



L9 ANSWER 10 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:330806 HCPLUS

DN 140:347593

TI Lithography printing master having first recording layer containing binder polymer and second recording layer containing IR absorber

IN Kanzaki, Atsushi; Kunita, Kazuto

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 56 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004126050	A2	20040422	JP 2002-287819	20020930
	US 2004131971	A1	20040708	US 2003-671776	20030929
PRAI	JP 2002-287819	A	20020930		

AB The lithog. printing master comprises an image recording layer near the interface with a support which does not harden upon laser exposure. The image recording layer has a double layer structure which consists of the 1st layer containing a binder polymer and the 2nd layer containing a binder polymer, a polymerization initiator, a polymerizable compound, and an IR absorber

and gives a development rate  $\geq 100$  nm/s at the unexposed area when an alkali developer with pH 10-13.5 is used and an alkali developer permeation rate  $\leq 100$  nF/s. The development rate is a value obtained dividing the film thickness of the recording layer by a time required for the development. The permeation rate is the static capacitance change when the recording layer is dipped in the developer.

IT 681147-33-1

RL: NUU (Other use, unclassified); USES (Uses)

(IR absorber; lithog. printing master having first recording layer containing binder polymer and second recording layer containing IR absorber)

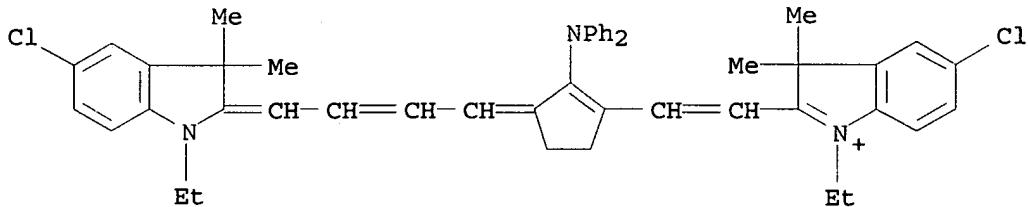
RN 681147-33-1 HCPLUS

CN 3H-Indolium, 5-chloro-2-[2-[3-[4-(5-chloro-1-ethyl-1,3-dihydro-3,3-

dimethyl-2H-indol-2-ylidene)-2-butenylidene]-2-(diphenylamino)-1-cyclopenten-1-yl]ethenyl]-1-ethyl-3,3-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

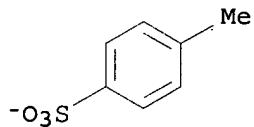
CM 1

CRN 681147-32-0  
CMF C47 H48 Cl2 N3



CM 2

CRN 16722-51-3  
CMF C7 H7 O3 S



L9 ANSWER 11 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:57883 HCPLUS

DN 140:131077

TI Pigment sensitized photoelectric converter

IN Ikeda, Masaaki; Shigaki, Koichiro; Inoue, Teruhisa

PA Nippon Kayaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 23 pp.

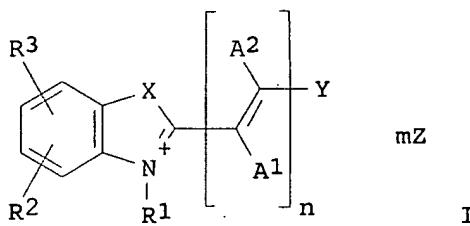
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004022222	A2	20040122	JP 2002-172433	20020613
PRAI JP 2002-172433		20020613		
OS MARPAT 140:131077				
GI				



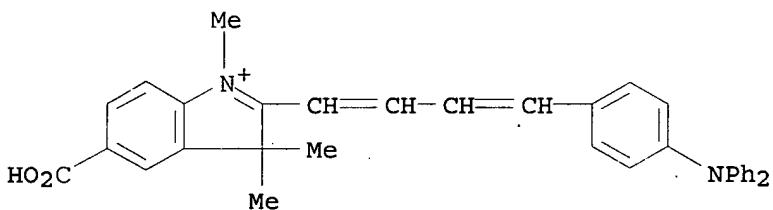
AB The title transducer has fine oxide semiconductor particles sensitized by a methine pigment I [A1,2 = H or substituent; X = O, S, Se, CRR', CR:CR' or NR'' (R, R' and R'' = H or substituent); Y = (substituted) aromatic hydrocarbon residue aromatic hydrocarbon (excluding salicylic acid and polysubstituted hydroxybenzene), or (substituted) organic complex residue; R1 = (substituted) aliphatic hydrocarbon residue, (substituted) aromatic hydrocarbon residue, or H; N may not be quaternarized, if R1 is not exist; R2 = H or substituent; R3 = carboxyl, alkoxy carbonyl, or aryloxy carbonyl group; n = integer 1-4; m = 0, 1/2, and 1; Z = counterion].

IT 648900-71-4

RL: DEV (Device component use); USES (Uses)  
(methine pigment sensitized oxide semiconductors for solar cells)

RN 648900-71-4 HCAPLUS

CN 3H-Indolium, 5-carboxy-2-[4-[4-(diphenylamino)phenyl]-1,3-butadienyl]-1,3,3-trimethyl-, iodide (9CI) (CA INDEX NAME)



• I -

L9 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2003:973257 HCAPLUS

DN 140:180993

### TI Amine donor

AU Park, Gyoosoon; Ra, Choon Sup; Cho, Bong Rae

Department of Chemistry, Kookmin University

Department of Chemistry, Korea Maritime University, Seoul, 136-702, S. Korea  
Bulletin of the Korean Chemical Society (2003), 24 (11), 1671-1674

Journal of the Korean Chemical Society (2003), 24(11), 1671-1674

ISSN: 0253-2964  
Korean Chemical Society

PB Korean Chemical Society  
PT Journal

DT  
Journal  
Englisch

LA English  
3.5 55

AB The effects of amine donors (a:NH<sub>2</sub>, b:NMe<sub>2</sub>, c:NMePh, d:NPh<sub>2</sub>) and conjugation length on the mol. hyperpolarizabilities of a series of dipolar mols. have been theor. investigated by using CPHF/6-31G method. The first hyperpolarizabilities ( $\beta$ ) of p-nitrobenzene derivs.

increase with the donor in the order, NH<sub>2</sub> < NMe<sub>2</sub> < NMePh < NPh<sub>2</sub>, whereas slightly different order is observed in more conjugated derivs., i.e., NH<sub>2</sub> < NPh<sub>2</sub> < NMe<sub>2</sub> < NMePh. The result has been attributed to the extent of charge transfer and torsion angle. Moreover, the results show that "non-traditional"  $\pi$ -conjugation effect exists in small compds. and decreases as the conjugation length between donor and acceptor increases.

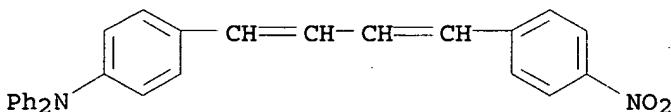
IT 657405-60-2, 1-[4-(Diphenylamino)phenyl]-4-(4-nitrophenyl)-1,3-butadiene

RL: PRP (Properties)

(N-Me and N-Ph substituent effects on first hyperpolarizability of nonlinear optical dipolar mols. containing amine donors)

RN 657405-60-2 HCPLUS

CN Benzenamine, 4-[4-(4-nitrophenyl)-1,3-butadienyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 2003:406117 HCPLUS

DN 139:165848

TI Synthesis and characterization of new oxadiazoleamine based spiro-linked fluorescence dyes

AU Pudzich, R.; Salbeck, J.

CS Macromolecular Chemistry and Molecular Materials, University Kassel, Kassel, 34132, Germany

SO Synthetic Metals (2003), 138(1-2), 21-31  
CODEN: SYMEDZ; ISSN: 0379-6779

PB Elsevier Science B.V.

DT Journal

LA English

OS CASREACT 139:165848

AB We present the synthesis and characterization of a new class of bipolar compds. based on unsym. substituted spirobifluorenes intended as active materials for organic light emitting devices. The compds. are essentially based on a center core of spirobifluorene equipped with electron-donating oxadiazole-groups in the 2- and 2'- and electron-accepting diphenylamine groups in the 7- and 7'-positions. All compds. can be processed into thin amorphous films with high morphol. stability by simple spin coating from solns. in organic solvents and show intense fluorescence in solution as well as in the solid state. The emission range of the resulting dyes can be tuned in the range between 370 and 540 nm by varying the conjugated system or changing the strength of the acceptor and donor moieties.

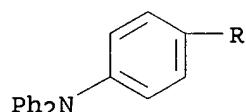
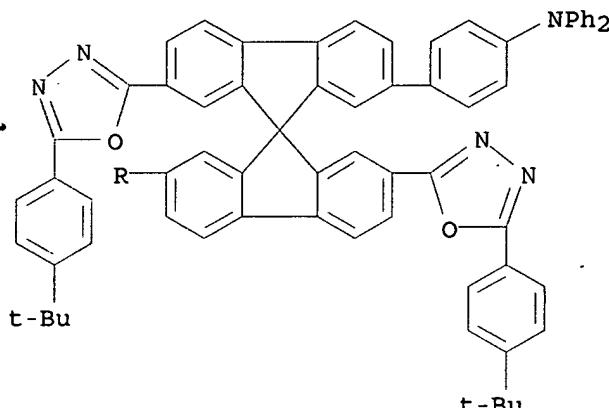
IT 574746-64-8P 574746-66-0P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(fluorescent dye; preparation of spirobifluorene oxadiazole derivative dyes)

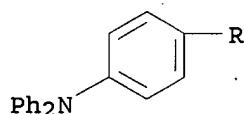
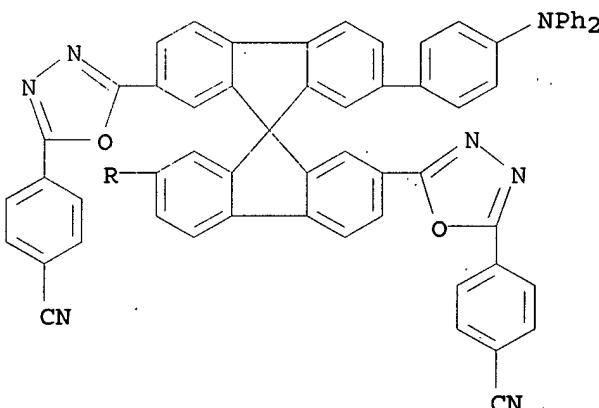
RN 574746-64-8 HCPLUS

CN Benzenamine, 4,4'-[7,7'-bis[5-[4-(1,1-dimethylethyl)phenyl]-1,3,4-oxadiazol-2-yl]-9,9'-spirobi[9H-fluorene]-2,2'-diyl]bis[N,N-diphenyl- (9CI) (CA INDEX NAME)



RN 574746-66-0 HCPLUS

CN Benzonitrile, 4,4'-[{7,7'-bis[4-(diphenylamino)phenyl]-9,9'-spirobi[9H-fluorene]-2,2'-diyl}bis(1,3,4-oxadiazole-5,2-diyl)]bis- (9CI) (CA INDEX NAME)



RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
AN 1998:397951 HCPLUS

DN 129:128951

TI Electrophotographic photoreceptors containing organic charge transfer agents

IN Sakon, Yota; Umeda, Minoru; Ikegami, Takaaki; Kurimoto, Eiji

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 238 pp.

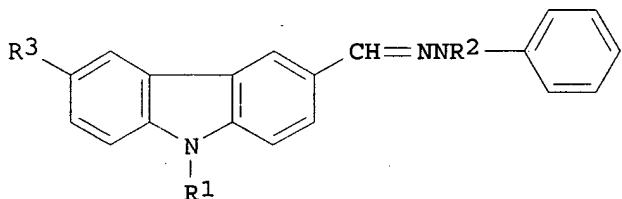
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10161329	A2	19980619	JP 1996-339006	19961204
PRAI	JP 1996-339006				
OS	MARPAT 129:128951				
GI					



AB The title electrophotog. photoreceptor contains a charge transfer agent of the formula I ( R1 = lower alkyl, 2-chloroethyl, 2-hydroxyethyl; R2 = lower alkyl, Bz, Ph; R3 = H, halo, lower alkyl, lower alkoxy, dialkylamino, nitro ) and one or more organic charge transfer agents selected from compds. defined by 25 Markush structures. The photoreceptor shows high sensitivity and durability.

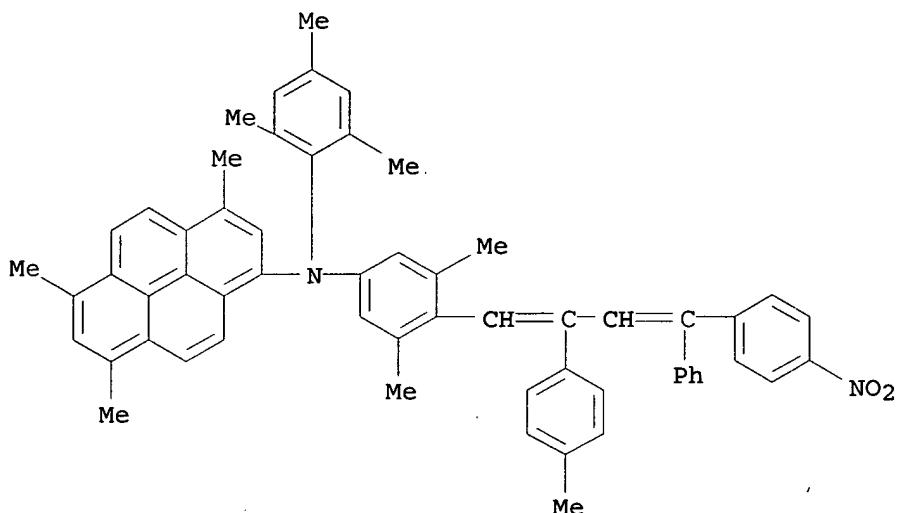
IT 210180-64-6

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(electrophotog. charge transfer agent)

RN 210180-64-6 HCPLUS

CN 1-Pyrenamine, N-[3,5-dimethyl-4-[2-(4-methylphenyl)-4-(4-nitrophenyl)-4-phenyl-1,3-butadienyl]phenyl]-3,6,8-trimethyl-N-(2,4,6-trimethylphenyl)-(9CI) (CA INDEX NAME)



L9 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1995:795773 HCAPLUS

DN 123:270724

TI Electrophotographic photosensitive materials

IN Ooshiba, Tomomi

PA Konishiroku Photo Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 17 pp.

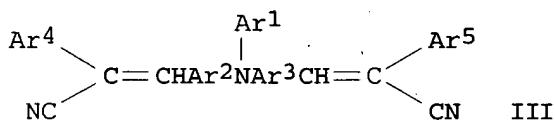
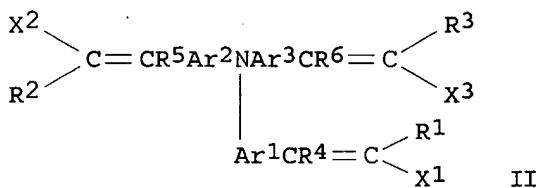
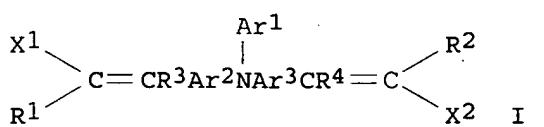
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07175236	A2	19950714	JP 1993-320179	19931220
PRAI JP 1993-320179		19931220		
GI				



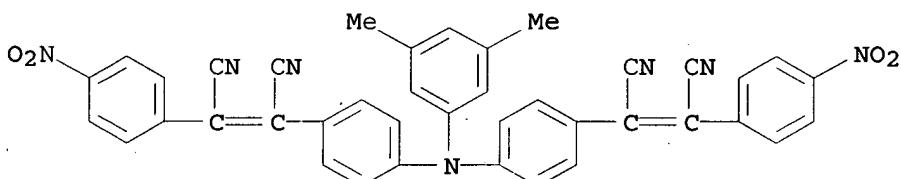
AB Electrophotog. materials comprising photosensitive layers formed on conducting supports contain I, II, or III [Ar1-5 = (un)substituted aromatic group; R1-6 = H, electron attractive group, (un)substituted alkyl, (un)substituted aroms.; X1-3 = electron-attractive group; for I: R1 = H, electron attractive group, (un)substituted alkyl when R3 = H and X1 = nitrile; R2 = H, electron attractive group, (un)substituted alkyl when R4 = H and X2 = nitrile]. The materials contain electron transferring substance.

Substance:

RL: DEV (Device component use); USES (Uses)  
(electrophotog. materials containing aromatic amine electron-transferring materials)

BN 168769-60-6 HCAPLUS

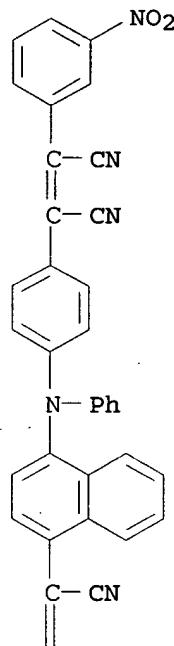
188705-30-0 NCAPLCS  
CN 2-Butenedinitrile, 2,2'-[[(3,5-dimethylphenyl)imino]di-4,1-phenylene]bis[3-(4-nitrophenyl)- (9CI) (CA INDEX NAME)



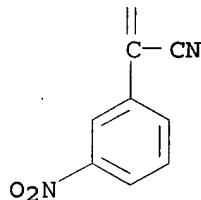
BN 168769-61-7 HCAPLUS

CN 2-Butenedinitrile, 2-[4-[[4-[1,2-dicyano-2-(3-nitrophenyl)ethenyl]-1-naphthalenyl]phenylamino]phenyl]-3-(3-nitrophenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

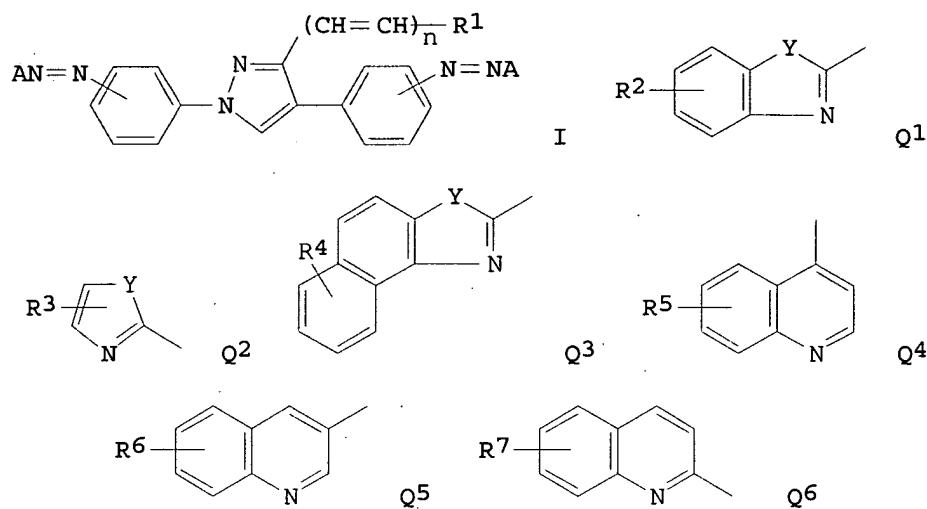


PAGE 2-A



L9 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1994:566915 HCAPLUS  
 DN 121:166915  
 TI Electrophotographic photoreceptor containing bisazo pigment  
 IN Hanatani, Yasuyuki; Kadoi, Mikio; Sakai, Hirosuke  
 PA Mita Industrial Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 22 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06095408	A2	19940408	JP 1992-246133	19920916
PRAI JP 1992-246133		19920916		
GI				



AB The electrophotog. photoreceptor has an elec. conductive layer coated with a photosensitive layer containing a bisazo pigment I [A = coupler residue; R1 = H, (substituted) alkyl, (substituted) aryl, (substituted) heterocyclic group; n = 0, 1] as a charge-generating material and a charge-transporting agent X(CH<sub>2</sub>CH<sub>2</sub>)<sub>p-1,4-C6H4NAr1Ar2</sub> [Ar1-2 = (substituted) aryl; p = 1, 2; X = N-containing heterocyclic group Q1-6; R2-7 = H, halo, alkyl, alkoxy; Y = S, O, Se]. The photoreceptor showed good elec. property and gave high-d. images in repeated use.

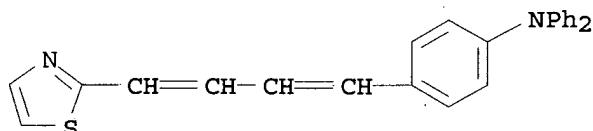
IT 157401-56-4

RL: USES (Uses)

(charge-transporting agent, electrophotog. photoreceptor containing, for high-d. images in repeated use)

RN 157401-56-4 HCPLUS

CN Benzenamine, N,N-diphenyl-4-[4-(2-thiazolyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



L9 ANSWER 17 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1994:453501 HCPLUS

DN 121:53501

TI Fluorescent immunoassay using cyanine dyes as labels

IN Sakai, Yasushi; Shimada, Kenichi; Ooe, Kazue

PA Ibiden Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

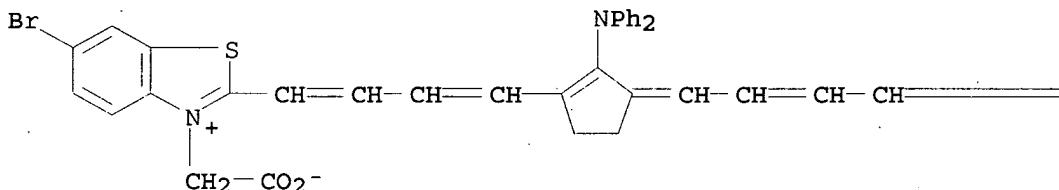
KIND DATE

APPLICATION NO.

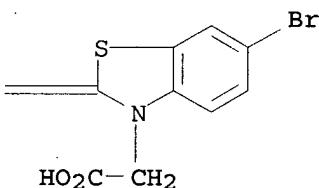
DATE

PI JP 06118081 A2 19940428 JP 1992-293692 19921006  
 JP 3354975 B2 20021209  
 PRAI JP 1992-293692 19921006  
 OS MARPAT 121:53501  
 AB Cyanine dyes are linked to bioactive substances directly or indirectly through avidin, protein A, aminoglycan, or polypeptide. The cyanine dye-labeled bioactive substances are used for immunoassay. Thus, NK3625-avidin conjugates paired with biotin-chitosan-anti-amylase antibody conjugates were prepared and used for amylase determination. Similar cyanine dye-avidin conjugates and biotin-chitosan-antibody conjugates were prepared for determination of human chorionic gonadotropin, human calcitonin, human follicle-stimulating gonadotropin, human calcitonin, human  
 IT 156186-69-5D, conjugates with antibody  
 RL: ANST (Analytical study)  
 (for human chorionic gonadotropin determination)  
 RN 156186-69-5 HCPLUS  
 CN Benzothiazolium, 6-bromo-2-[4-[3-[4-[6-bromo-3-(carboxymethyl)-2(3H)-benzothiazolylidene]-2-butenylidene]-2-(diphenylamino)-1-cyclopenten-1-yl]-1,3-butadienyl]-3-(carboxymethyl)-, inner salt (9CI) (CA INDEX NAME)

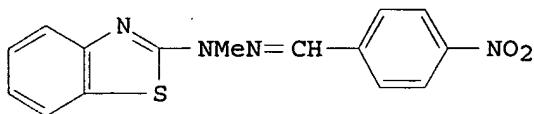
PAGE 1-A



PAGE 1-B



L9 ANSWER 18 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 1994:204627 HCPLUS  
 DN 120:204627  
 TI Electrophotographic photoreceptors used in back side exposure process  
 IN Hirao, Akiko; Sugiuchi, Masami  
 PA Tokyo Shibaura Electric Co, Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE  
 PI JP 05281761 A2 19931029 JP 1992-77177 19920331  
 PRAI JP 1992-77177 19920331  
 GI



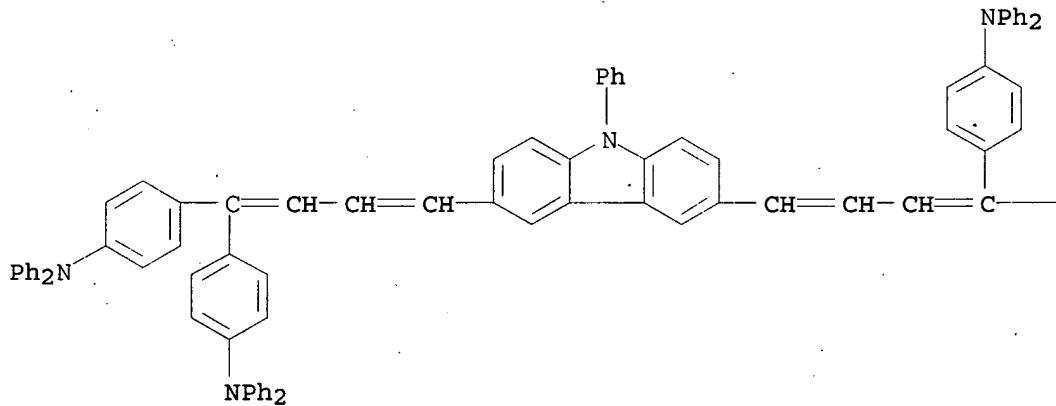
AB The photoreceptors are prepared by forming a transparent conductive layer, a charge-generating layer, and a charge-transporting layer having maximum absorption wavelength of visible light at 450-800 nm successively on a transparent support. The photoreceptors used in back side exposure process show good durability in repeated use. Thus, a polyester film was coated with In-Sn oxide and the made into a cylinder, and the cylindrical support was coated successively with an undercoat layer, a charge-generating layer containing  $\tau$ -type metal-free phthalocyanine, and a charge-transporting layer containing I to give a photoreceptor.

IT 153734-25-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (electrophotog. photoreceptor charge-transporting agent)

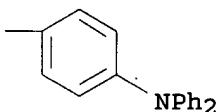
RN 153734-25-9 HCAPLUS

CN Benzenamine, 4,4',4'',4'''-[(9-phenyl-9H-carbazole-3,6-diyl)di-1,3-butadien-4-yl-1-ylidene]tetrakis[N,N-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L9 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1991:237611 HCAPLUS  
 DN 114:237611  
 TI Electrophotographic photoreceptor using new photoconductive material  
 IN Miyazaki, Hajime; Go, Shintetsu; Takai, Hideyuki; Inai, Kazufumi  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02244059	A2	19900928	JP 1989-63560	19890317
PRAI JP 1989-63560		19890317		

OS MARPAT 114:237611

GI For diagram(s), see printed CA Issue.

AB The title photoreceptor comprises a layer containing a compound I [X = (substituted) aryl, arylene, heterocycle, di- or triarylamino; R, R1 = (substituted) alkyl, aryl, aralkyl, alkoxy, OH; R and R1 may form a cyclic alkyl; Z, Z1 = O, S, C(CN)2; m = 1-3; n = 0-2]. The photoreceptor shows good photosensitivity and stable potential in repeated use. Thus, a photoreceptor was prepared by using an Al support, a charge-generating layer containing II, and a charge-transporting layer containing a hydrazone compound

IT 133890-89-8

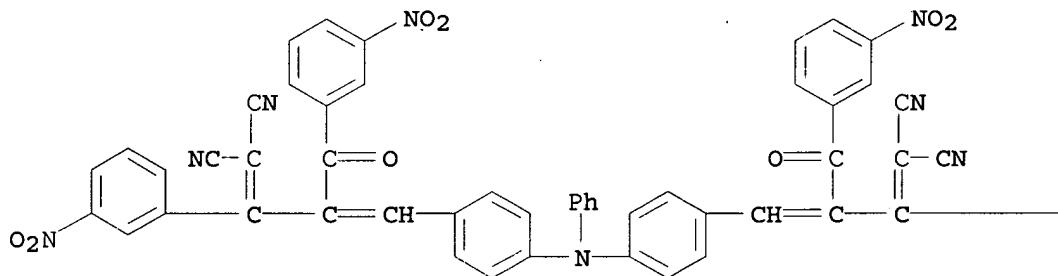
RL: USES (Uses)

(charge-generating agent, electrophotog. photoreceptor using)

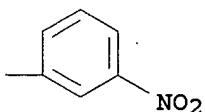
RN 133890-89-8 HCAPLUS

CN Propanedinitrile, 2,2'-(phenylimino)bis[4,1-phenylene[2-(3-nitrobenzoyl)-1-(3-nitrophenyl)-2-propen-3-yl-1-ylidene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L9 ANSWER 20 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN  
 AN 1990:621322 HCPLUS  
 DN 113:221322  
 TI Charge-transporting compositions for organic electrophotographic photoreceptors  
 IN Kanamaru, Tetsuo; Kikuchi, Norihiro; Suzuki, Koichi; Matsumoto, Masakazu  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

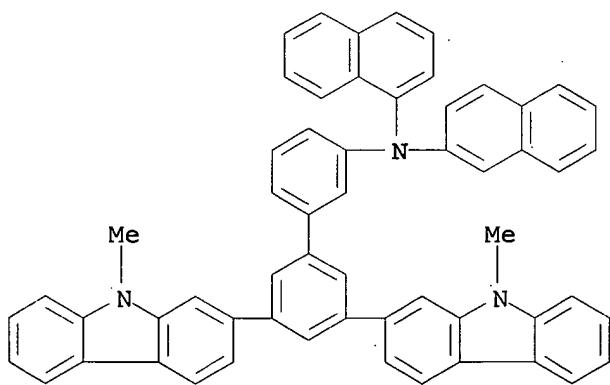
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02129648	A2	19900517	JP 1988-282426	19881110
PRAI JP 1988-282426		19881110		
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Electrophotog. photoreceptors, which comprise laminated photosensitive layers on an elec. conductive support, contain a charge-transporting benzene derivative I [R, R1-2 = (substituted) aryl, heterocycle;  $\geq 1$  of R, R1-2 = NR3R4; R3-4 = H, (substituted) alkyl, aryl, aralkyl, heterocycle; R3, R4, and linking N may form 5-, 6-, or 7-membered ring]. The photoreceptors exhibit good sensitivity and durability. Thus, an Al sheet was coated with a charge-generating composition containing a bisazo pigment  
 II and coated with a composition containing I (R, R1-2 = p-NMe2C6H4) and a polycarbonate to give a photoreceptor, which showed excellent electrophotog. properties.

IT 130413-51-3  
 RL: USES (Uses)  
 (charge-transporting agent, for electrophotog. photoconductor)

RN 130413-51-3 HCPLUS  
 CN 1-Naphthalenamine, N-[3',5'-bis(9-methyl-9H-carbazol-2-yl)][1,1'-biphenyl]-3-yl]-N-2-naphthalenyl- (9CI) (CA INDEX NAME)



L9 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1990:601374 HCAPLUS

DN 113:201374

TI Electrophotographic photoreceptors using hydrazone compound as charge-transporting agent

IN Kikuchi, Norihiro; Kanamaru, Tetsuo

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02097965	A2	19900410	JP 1988-251466	19881004
PRAI	JP 1988-251466		19881004		

AB The title photoreceptors comprise a conductive support coated with photosensitive layer containing a hydrazone compound RCR1:C(CR2:NR3R4)2 [I; R = aromatic ring, heterocycle; R1-4 = alkyl, aralkyl, aromatic ring, heterocycle,  $\geq 1$  of R3 and R4 should be an aromatic ring, R1 may be H, (all the groups and rings may be substituted)]. The photoreceptors show good photosensitivity and durability. Thus, an Al Substrate was coated with a charge-generating layer containing a disazo pigment and with a charge-transporting layer containing I (R = 9-anthranyl, R1 = H, R2 = Me, R3 = R4 = Ph) to give a photoreceptor.

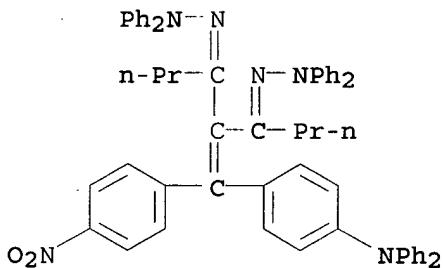
IT 130335-37-4

RL: USES (Uses)

(charge-transporting agent, electrophotog. photoreceptor using)

RN 130335-37-4 HCAPLUS

CN 4,6-Nonanedione, 5-[[4-(diphenylamino)phenyl](4-nitrophenyl)methylene]-, bis(diphenylhydrazone) (9CI) (CA INDEX NAME)



L9 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1990:581424 HCAPLUS

DN 113:181424

TI Electrophotographic photoreceptors using styryl compound as charge-transporting agent

IN Kikuchi, Norihiro; Kanamaru, Tetsuo

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

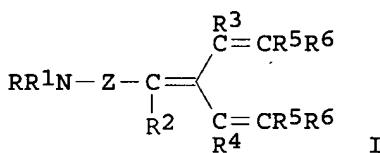
DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI JP 02097960	A2 19900410	JP 1988-251468	19881004
PRAI JP 1988-251468		19881004	
GI			



AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a styryl compound I [R, R1-6 = H, (substituted) alkyl, (substituted) aralkyl, (substituted) aromatic ring, (substituted) heterocycle, R and R1 may form a ring, not(R = R1 = H), not(R5= R6= H), Z = divalent (substituted) aromatic ring, divalent (substituted) heterocycle]. The photoreceptors show good photosensitivity and durability. Thus, an Al substrate was coated with a charge-generating layer containing a disazo pigment and with a charge-transporting layer containing I (R = R1 = R3 = R4 = R6 = Ph, R2 = R5 = H, Z = p-phenylene) to give a photoreceptor.

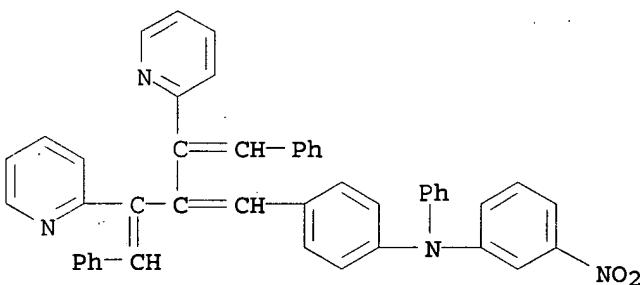
IT 130072-52-5

RL: USES (Uses)

(charge-transporting agent, electrophotog. photoreceptor using)

RN 130072-52-5 HCPLUS

CN Benzenamine, 3-nitro-N-phenyl-N-[4-[4-phenyl-2-[2-phenyl-1-(2-pyridinyl)ethenyl]-3-(2-pyridinyl)-1,3-butadienyl]phenyl]-(9CI) (CA INDEX NAME)



L9 ANSWER 23 OF 24 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1990:149004 HCPLUS

DN 112:149004

TI Electrophotographic photoreceptor containing butadiene derivative

IN Nakamura, Yoichi; Kuroda, Masami; Kosho, Noboru

PA Fuji Electric Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 63 pp.

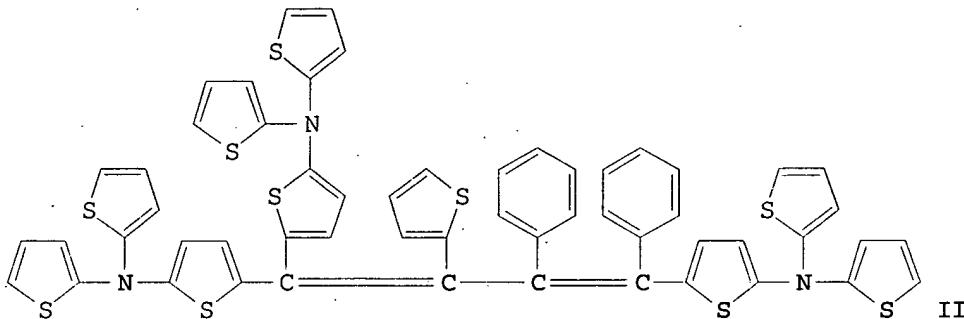
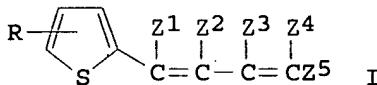
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01152461	A2	19890614	JP 1987-311313	19871209



AB In the title photoreceptor, a photoconductive layer contains butadiene derivative I [R = H, halo, cyano, NO<sub>2</sub>, etc.; Z<sub>1</sub> - Z<sub>4</sub> = H, (substituted) aryl, heteroaryl; Z<sub>5</sub> = (substituted) aryl, heteroaryl]. The photoreceptor shows improved sensitivity and durability. The butadiene derivative is used as a charge-transporting material. II is used as an example of I.

IT 124965-16-8 124966-26-3 124967-36-8

124968-29-2 124968-38-3 124970-97-4

124971-58-0 124971-59-1 124972-69-6

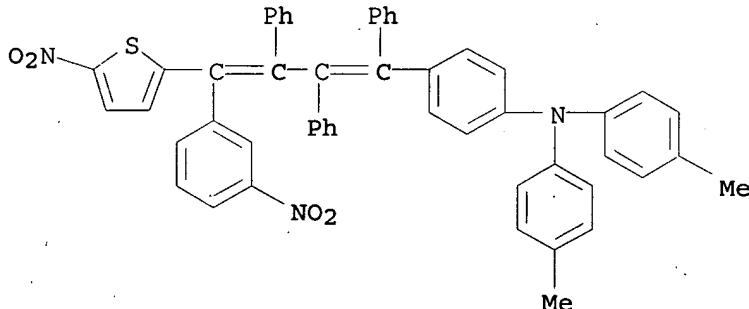
124973-24-6 125018-09-9 125018-56-6

RL: USES (Uses)

(charge-transporting material, in electrophotog. photoconductor)

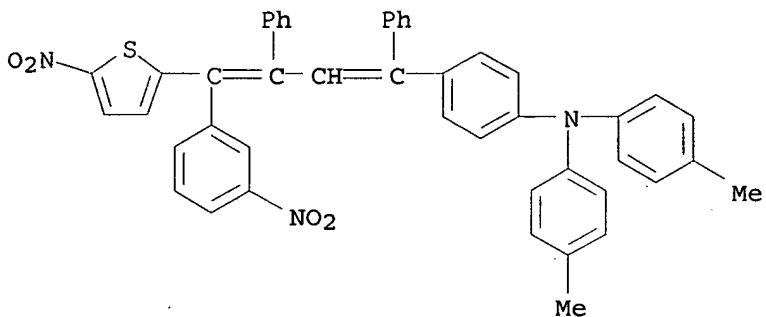
RN 124965-16-8 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-1,2,3-triphenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



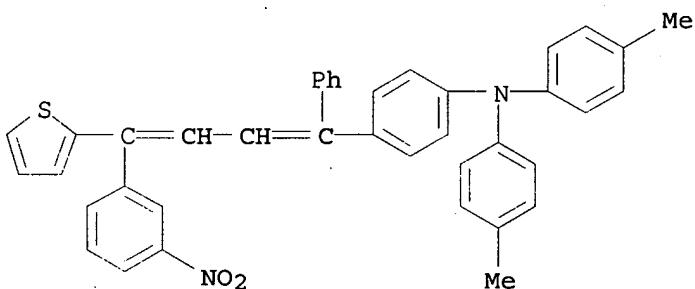
RN 124966-26-3 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-1,3-diphenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



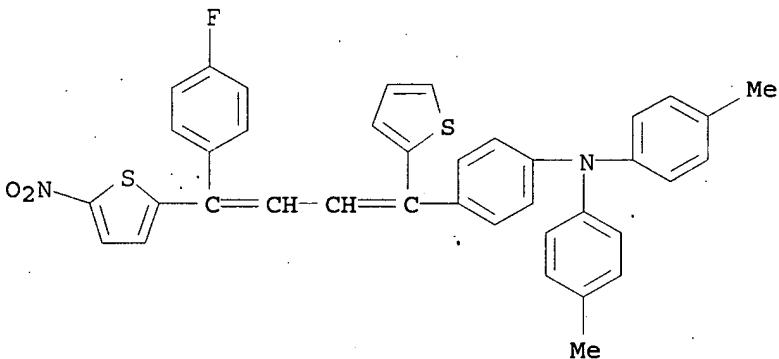
RN 124967-36-8 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-1-phenyl-4-(2-thienyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



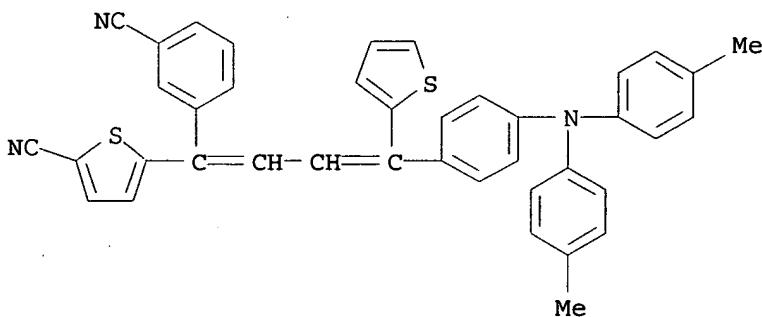
RN 124968-29-2 HCAPLUS

CN Benzenamine, 4-[4-(4-fluorophenyl)-4-(5-nitro-2-thienyl)-1-(2-thienyl)-1,3-butadienyl]-N,N-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



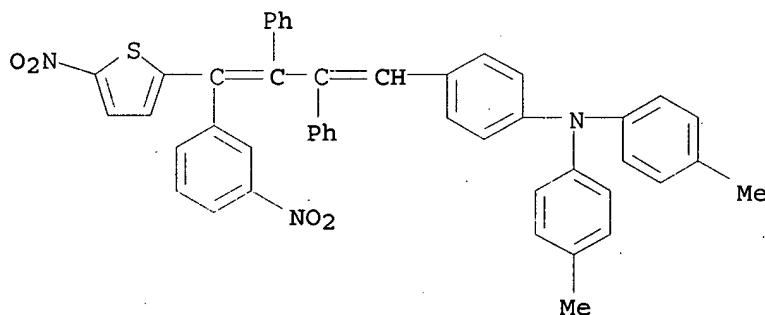
RN 124968-38-3 HCAPLUS

CN 2-Thiophenecarbonitrile, 5-[4-[4-[bis(4-methylphenyl)amino]phenyl]-1-(3-cyanophenyl)-4-(2-thienyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



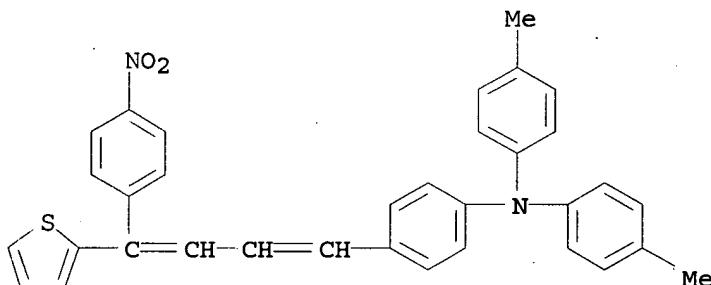
RN 124970-97-4 HCPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-2,3-diphenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



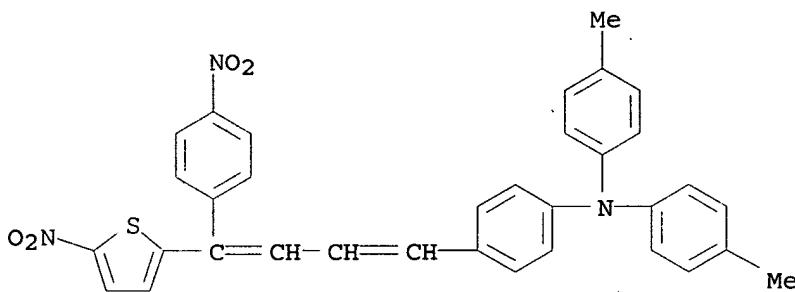
RN 124971-58-0 HCPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(4-nitrophenyl)-4-(2-thienyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



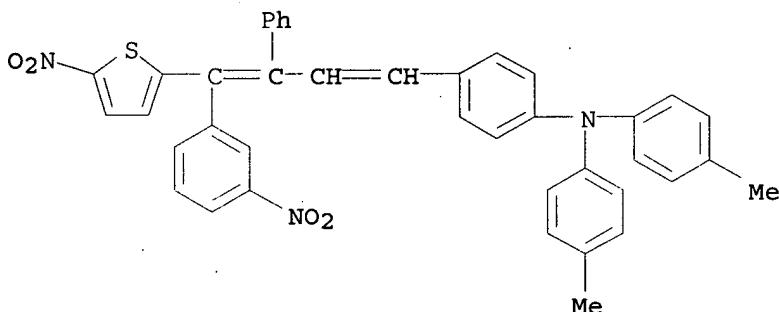
RN 124971-59-1 HCPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(4-nitrophenyl)-4-(5-nitro-2-thienyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



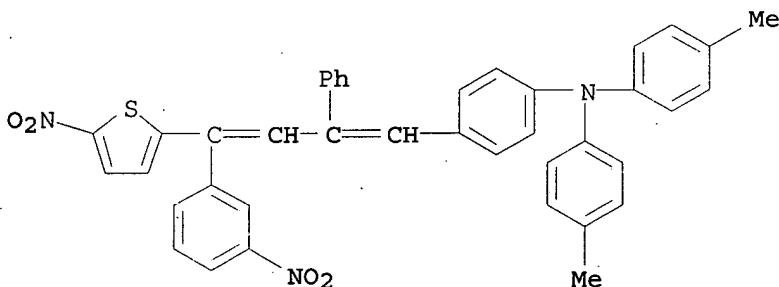
RN 124972-69-6 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-3-phenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



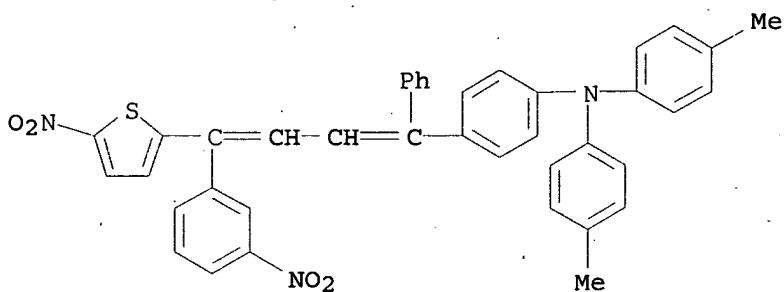
RN 124973-24-6 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-2-phenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



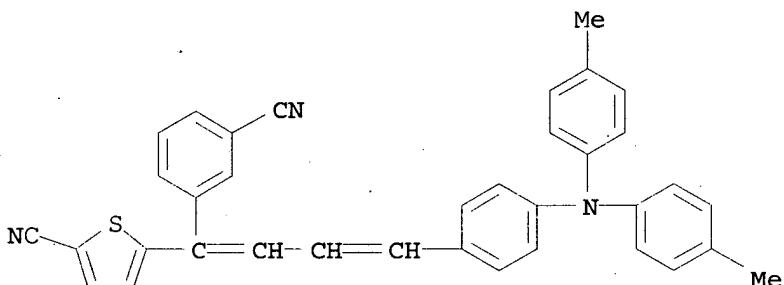
RN 125018-09-9 HCAPLUS

CN Benzenamine, N,N-bis(4-methylphenyl)-4-[4-(3-nitrophenyl)-4-(5-nitro-2-thienyl)-1-phenyl-1,3-butadienyl]- (9CI) (CA INDEX NAME)



RN 125018-56-6 HCAPLUS

CN 2-Thiophenecarbonitrile, 5-[4-[4-[bis(4-methylphenyl)amino]phenyl]-1-(3-cyanophenyl)-1,3-butadienyl]- (9CI) (CA INDEX NAME)



L9 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1989:85388 HCAPLUS

DN 110:85388

TI Electrophotographic photoreceptor containing tris(p-styrylphenyl)amine derivative as charge-transporting material

IN Suzuki, Hitomi; Matsumoto, Masakazu

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

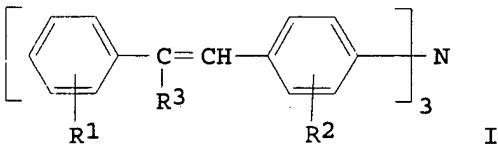
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63163361	A2	19880706	JP 1986-310015	19861225
PRAI JP 1986-310015		19861225		
OS MARPAT 110:85388				
GI				



AB The title photoreceptor has a layer containing a tris(p-styrylphenyl)amine

KATHLEEN FULLER EIC 1700 REMSON 4B28 571/272-2505

derivative I [R1, R2 = H, (substituted) alkyl, halogen, NO<sub>2</sub>, (substituted) amino, CN, (substituted) alkoxy; R3 = (substituted) alkyl, (substituted) aryl, heterocycl, or a moiety which forms a polyarom. ring with C and the adjacent benzene rings]. These derivs. may be used as charge-transporting materials. An electrophotog. photoreceptor using I as the charge-transporting material shows improved sensitivity, durability, and residual potential.

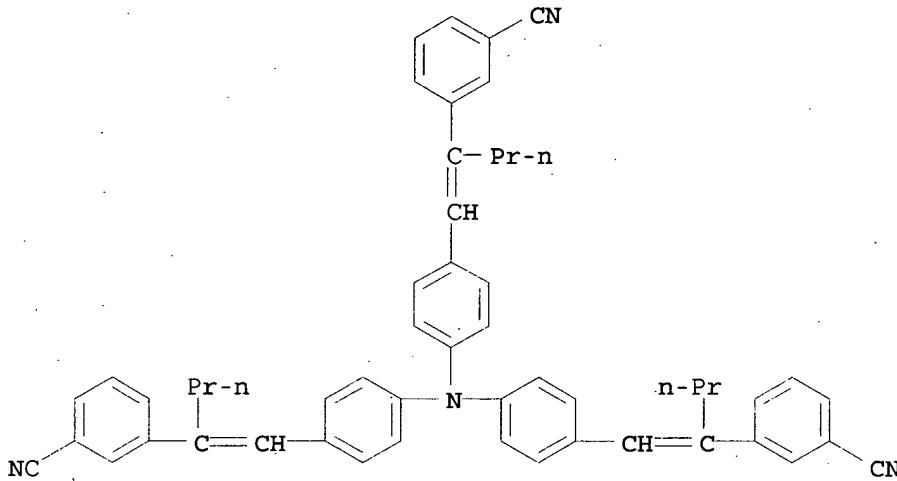
IT 118960-01-3

RL: USES (Uses)

(charge-transporting material, for electrophotog. photoreceptor)

RN 118960-01-3 HCAPLUS

CN Benzonitrile, 3,3',3'''-[nitrilotris[4,1-phenylene(1-propyl-2,1-ethenediyl)]]tris- (9CI) (CA INDEX NAME)



=&gt;